



# ***NOAA Backgrounder***

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## **NOAA Research Office of Oceanic and Atmospheric Research**

### **Who We Are**

NOAA's research, conducted through the Office of Oceanic and Atmospheric Research (OAR), is the driving force behind NOAA environmental products and services that protect life and property and promote sustainable economic growth. Research, conducted in in-house laboratories and by extramural programs, focuses on enhancing our understanding of environmental phenomena such as tornadoes, hurricanes, climate variability,

solar flares, changes in the ozone, El Niño/La Niña events, fisheries productivity, ocean currents, deep sea thermal vents, and coastal ecosystem health. NOAA research also develops innovative technologies and observing systems.

### **A WORD ABOUT NOAA. . .**

The National Oceanic and Atmospheric Administration (NOAA) conducts research and gathers data about the global oceans, atmosphere, space, and sun, and applies this knowledge to science and service that touch the lives of all Americans.

NOAA warns of dangerous weather, charts our seas and skies, guides our use and protection of ocean and coastal resources, and conducts research to improve our understanding and stewardship of the environment which sustains us all.

A Commerce Department agency, NOAA provides these services through five major organizations: the National Weather Service, the National Ocean Service, the National Marine Fisheries Service, the National Environmental Satellite, Data and Information Service, and Office of Oceanic and Atmospheric Research; and numerous special program units. In addition, NOAA research and operational activities are supported by the Nation's seventh uniformed service, the NOAA Corps, a commissioned officer corps of men and women who operate NOAA ships and aircraft, and serve in scientific and administrative posts.

For further information: NOAA Office of Public Affairs, 14th Street and Constitution Avenue NW, Room 6013, Washington, D.C. 20230. Phone: (202) 482-6090.

The NOAA Research network consists of 12 internal research laboratories, extramural research at 29 Sea Grant university and research programs, six undersea research centers, a research grants program through the Office of Global Programs, and 11 cooperative institutes with academia. Through NOAA and its academic partners, thousands of scientists, engineers, technicians, and graduate students participate in furthering our knowledge of natural phenomena that affect the lives of us all.

NOAA's research serves diverse customers. The average citizen benefits through earlier warnings of threatening weather, healthier coasts and fisheries, or a broader understanding of environmental processes. The private sector uses NOAA data to make business decisions and also employs technology developed and transferred by NOAA scientists. Federal agencies, state governments, and local authorities rely on NOAA research expertise for the sound scientific basis of crucial policy decisions related to environmental protection and restoration strategies. NOAA researchers are recognized as international leaders on environmental issues. With their international counterparts, NOAA scientists contribute to the understanding and assessment of issues such as ozone depletion and climate variability which must be addressed worldwide to ensure success.

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## **What We Do**

NOAA and the nation depend on the cutting-edge research provided by OAR. NOAA Research built much of the foundation for the modernization of the National Weather Service, the understanding and monitoring of climate variability, and improvements in coastal ocean health. Working under the broad themes of Climate, Atmosphere, and Ocean/Coastal Resources, NOAA scientists study the ocean's depths and the highest reaches of space to better understand our environment.

NOAA's long-term commitment to the highest quality research includes employing in-house and extramural talent to engage in six major areas:

- ☉ Continue to conduct experiments to understand natural processes (physical, geochemical, ecological) ;
- ☉ Build predictive models for use in weather, climate, solar, ocean, and coastal assessments and predictions;
- ☉ Develop and deploy new observing technologies to provide data to support predictive models and to document natural variability;
- ☉ Develop new analytical and forecast tools to improve weather services;
- ☉ Use new information technology to share information with other federal and academic scientists; and
- ☉ Prepare scientific assessments and information products to enhance public education and guide governmental action.

Research plans and products are developed in partnership with academia and other federal agencies, and are peer-reviewed and widely distributed. A high premium is placed on external collaboration—both domestically and internationally. In addition, personnel management practices of hiring, promotion, and awards are based on demonstrable capability through internal and external peer assessment. These actions—peer review, collaboration, and partnerships—ensure that NOAA's research is of the highest quality and remains focused on critical issues.

## **How the Nation and the World Benefit**

Most of the environmental questions our nation and the world face are not easily answered. A strong NOAA is necessary to tackle the complex issues that only advanced scientific knowledge is able to adequately address. NOAA Research answers the call and:

- ☉ Provides comprehensive knowledge to guide national environmental policy decisions, including better predictions of the climate response to emissions changes, choices for protection of the ozone layer, and alternatives for developing coastal communities;
- ☉ Improves environmental services to the nation, including reliable predictions and assessments; and
- ☉ Promotes economic growth through science for decision-making, new technology, and partnerships with academia and industry.

NOAA is a world leader in environmental science today and is well positioned and organized to provide the sound scientific research policy-makers will always need. ☉

**For more information contact NOAA Research Public Affairs Specialists Jana Goldman, (301) 713-2483 ext. 181; Barbara McGehan, (303)497-6288; Keli Tarp, (405) 366-0451 or visit our Web site. <http://www.oar.noaa.gov>**

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